

REMARKS

Claims 18-35 are pending and under consideration in the above-identified application.

Claims 1-17 were previously cancelled.

In the Office Action of October 23, 2009, claims 18-35 were rejected under 35 U.S.C. § 103(a).

With this Amendment, claims 18, 26 and 27 are amended. The amendments are supported by the specification at ¶ Page 11 of the specification. Applicants would like to note that the changes to the claims were made solely for the purpose of more particularly pointing out and distinctly claiming the subject matter which Applicants regard as their invention. No new matter has been added.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 18-35 were rejected under 35 U.S.C. § 103(a) as being purportedly unpatentable over *Hokari et al.* (US 2003/0168381) in view of *Wright et al.* (US 5,141,823). The Examiner's rejection is traversed.

In relevant part, independent claim 18 now recites "at least one pre-heater in thermal communication with said water feed and said diesel fuel and configured to heat water from said water feed and diesel fuel from said diesel fuel feed to a predetermined temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed," claim 26 now recites "means for preheating diesel fuel and water to a temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed," and claim 27 now recites "at least one pre-heater in thermal communication with said water feed and said jet fuel and configured to heat water from said water feed and jet fuel from said jet fuel feed

to a predetermined temperature equal to or greater than the critical temperature of water before the water and the jet fuel are mixed.”

This is clearly unlike *Hokari* and *Wright* which both fail to disclose or even suggest “at least one pre-heater in thermal communication with said water feed and said diesel fuel and configured to heat water from said water feed and diesel fuel from said diesel fuel feed to a predetermined temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed,” as recited in claim 18, “means for preheating diesel fuel and water to a temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed,” as recited in claim 26 or “at least one pre-heater in thermal communication with said water feed and said jet fuel and configured to heat water from said water feed and jet fuel from said jet fuel feed to a predetermined temperature equal to or greater than the critical temperature of water before the water and the jet fuel are mixed,” as recited in claim 27.

Instead, *Hokari* discloses a mixing unit 4, which mixes high temperature/high-pressure water with fuel together which results in the high temperature water heating the fuel by mixing. See, U.S. Pat. Pub. No. 2003/0168381, Para. [0036] and [0037]. *Wright* discloses three heat exchangers which are used to preheat **a fuel and water mixture** to 80% of the required temperature for reaction. See, U.S. Pat. No. 5,141,823, Col. 7, l. 19-49. Neither of these disclosures can be fairly viewed as at least one pre-heater or means for preheating which heats “diesel fuel and water to a temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed,” because both *Hokari* and *Wright* disclose heating **a mixture of water and fuel**. Further, *Wright* merely discloses heating the **fuel and water mixture to 80% of the required temperature for reaction** and *Hokari* does not disclose

anything pertaining the temperature of the fuel/water mixture leaving the mixer, much less the fuel water mixture being greater than the supercritical temperature of water.

As the Applicant's specification discloses, by pre-heating the water and the fuel via pre-heaters 107 in Fig. 1 to a temperature at or above the critical temperature of water before the fuel and water are mixed, the SCWR operates in a more efficient manner with less of a requirement on the SCWR resulting in faster production of hydrogen. See, Original Application, at pg. 11, line 20 to pg. 12, line 2.

Therefore, *Hokari* and *Wright*, either alone or in any known combination, fail to teach or suggest all of the limitations of independent claims 18, 26 and 27, and respectfully request that the rejection of claims 18, 26 and 27 be withdrawn.

Because claims 19-25 and 28-35 depend from and include all of the limitations of at least one of claims 18, 26 or 27, *Hokari* and *Wright* also fail to teach or suggest each of the elements of claims 19-25 and 28-35. As such, the Examiner's rejection of each of claims 18-35 should be withdrawn.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that claims 18-35 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Applicant petitions the Commissioner for Patents to extend the time for responding to the Office Action dated October 23, 2009 by 1 month for a fee of \$130, paid by credit card, so that the period for response is extended to February 23, 2010 under 37 C.F.R. § 1.136. The Commissioner is hereby authorized to charge any additional fees which may be required, to Account No. 19-3140.

Respectfully submitted,

Dated: February 22, 2010

By: /Timothy M Nitsch/
Timothy M. Nitsch
Registration No. 58,019
SONNENSCHNEIDER NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080